

Ent D3

3. (Amended) A set of probes perfectly complementary to and spanning a full-length sequence designated as of the SEQ ID NOS: 1-10.

4. (Amended) A method of classifying a mycobacteria, comprising  
providing a sample comprising a mycobacterial *rpoB* target nucleic acid from a mycobacteria;

determining the sequence of a segment of at least 50 contiguous bases from the target nucleic acid;

comparing the determined sequence to at least one sequence designated as SEQ ID NOS: 1-10;

classifying the mycobacteria from the extent of similarity of the compared sequences.

5. (Amended) The method of claim 4, wherein at least 100 contiguous bases are determined from the target nucleic acid.

Ent D4

6. (Amended) The method of claim 4, wherein the determined sequence is compared with at least ten sequences designated as SEQ ID NOS: 1-10.

7. (Amended) A method of classifying a mycobacteria, comprising  
providing a sample comprising a mycobacterial *rpoB* target nucleic acid; and,  
determining the identity of one or more bases in the target sequence at one or more positions corresponding to one or more of the highlighted positions in a sequence designated as any of the SEQ ID NOS: 1-10, the identity of the one or more bases characterizing the species of mycobacteria that is present in the sample.

Sub D4

8. (Amended) The method of claim 7, wherein the identity of at least 10 bases in the target nucleic acid at positions corresponding to highlighted positions in a sequence designated as any of the SEQ ID NOS: 1-10 is determined.

Sub D5

9. (Amended) The method of claim 8, wherein the identity of at least 20 bases in the target sequence at highlighted positions designated as any of the SEQ ID NOS: 1-10 are identified.

Sub D6

10. (Amended) The method of claim 9, further comprising comparing the 20 determined bases with 20 bases occupying corresponding positions in each of at least ten sequences designated as any of the SEQ ID NOS: 1-10.

11. (Amended) A sequence-specific polynucleotide probe or primer that hybridizes to a segment of a mycobacterial *rpoB* sequence designated as any of the SEQ ID NOS: 1-10 or its complement without hybridizing to the *M. tuberculosis* sequence designated SEQ ID NO: 1 or its complement, wherein the segment includes a highlighted nucleotide position designated as any of the SEQ ID NOS: 1-10.

Sub D7

12. (Amended) The sequence-specific polynucleotide of claim 11 that is a probe.

Sub D8

13. (Amended) The sequence-specific polynucleotide of claim 12, wherein a central position of the probe aligns with a highlighted nucleotide position designated as any of the SEQ ID NOS: 1-10.

Sub D9

14. (Amended) The sequence-specific polynucleotide of claim 11 that is a primer.